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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,524

04/15/2005

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498.03.02

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05/29/2008

EXAMINER

SHAHER, RICKY D

ART UNIT

PAPER NUMBER

2872

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,524	Applicant(s) KEMP, MALCOLM HUGH DAVID	
	Examiner Ricky D. Shafer	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/29/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,19,20,23-26 and 28-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,2,19,20,23-26 and 28-39 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. In view of Applicant's remarks filed on 02/29/2008, the lack of unity of invention requirement mailed on 10/01/2007 is withdrawn and a corrected lack of unity of invention requirement follows.

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 2, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having particular q_1 , q_2 and h values.

Group II, claim(s) 20, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having a solar thermal propulsion arrangement that creates direct thrust for powered flight by heating and expelling a propellant.

Group III, claim(s) 23, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having at least one or more additional mirrors for deflecting focused light photons away from the device.

Group IV, claim(s) 24-26, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device being adapted to concentrate electromagnetic radiation to a high temperature for the purpose of generating electric power.

Group V, claim(s) 28 and 31, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device being adapted for focusing an image of an object onto an image point and the mirrors of said device being arranged to create an

inwardly imploding dipole-like solutions to an applicable wave equation.

Group VI, claim(s) 29, 30, 38 and 39, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having a partially transparent plane mirror positioned proximate an image plane.

Group VII, claim(s) 32, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device being adapted to satisfy equivalent "ballistic" equations of motion.

Group VIII, claim(s) 33, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of the mirrors of said device being rotate about a common axis in order to maintain their required shape.

Group IX, claim(s) 34, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of the mirrors of said device being inflated to attain their required shape.

Group X, claim(s) 35, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having a solid state optical emitter or detector.

Group XI, claim(s) 36, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of the mirrors of said device being adapted to compensate for higher order aberrations.

Group XII, claim(s) 37, drawn to a high numerical aperture device having two mirrors with special technical features and/or details of said device having one or more additional mirrors and/or refracting or diffracting surfaces adapted to exhibit improved aberration

characteristics.

Claims 1 and 19 will be examined along with any one of the elected Groups I-XII.

3. The inventions listed as Groups I -XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: It appears any special technical feature of the above mentioned inventions relate to the separate features of the particular invention, absent an allowable linking claim to the above mentioned inventions.

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RDS

May 24, 2008

/Ricky D. Shafer/
Primary Examiner
Art Unit 2872